FIG.1

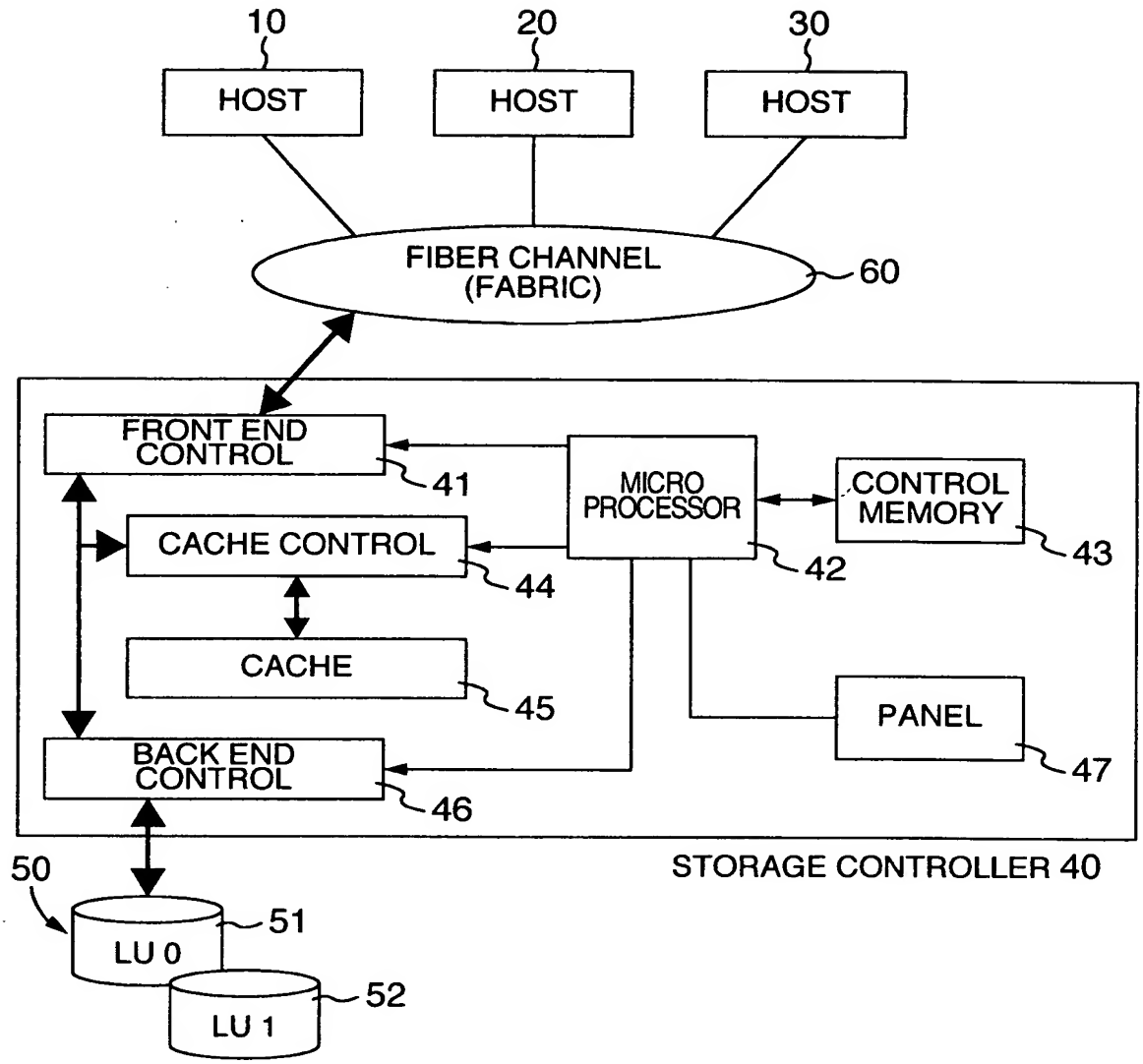

10
20
30
HOST
HOST
HOST
FIBER CHANNEL
(FABRIC)
60
FRONT END
CONTROL
41
MICRO
PROCESSOR
CONTROL
MEMORY
43
CACHE CONTROL
44
42
CACHE
45
PANEL
47
BACK END
CONTROL
46
STORAGE CONTROLLER 40
50
51
LU 0
52
LU 1

FIG.2

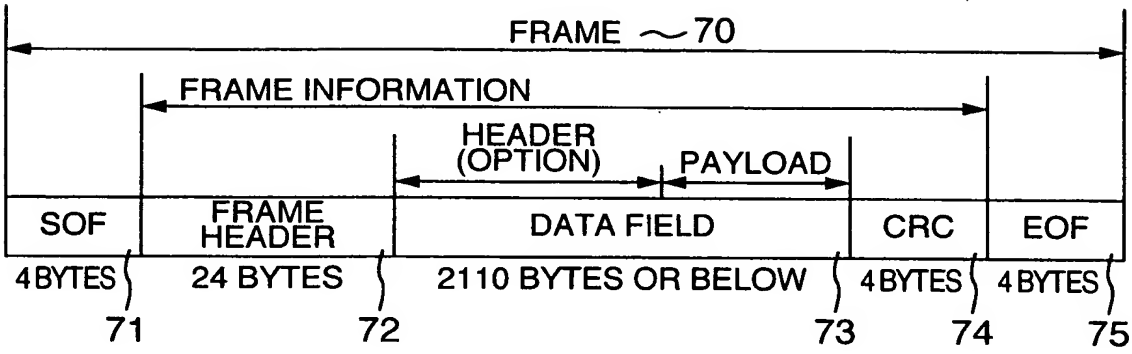


FIG.3

FRAME HEADER ~72

BIT / WORD	31-24	23-16	15-8	7-0
0	R_CTL	D_ID (N_PORT ADDRESS ID ON RECEIVER SIDE)		~81
1	RESERVED	S_ID (N_PORT ADDRESS ID ON TRANSMITTER SIDE)		~82
2	TYPE	F_CTL		
3	SEQ_ID	DF_CTL	SEQ_CNT	
4	OX_ID		RX_ID	
5	PARAMETER			

FIG.4

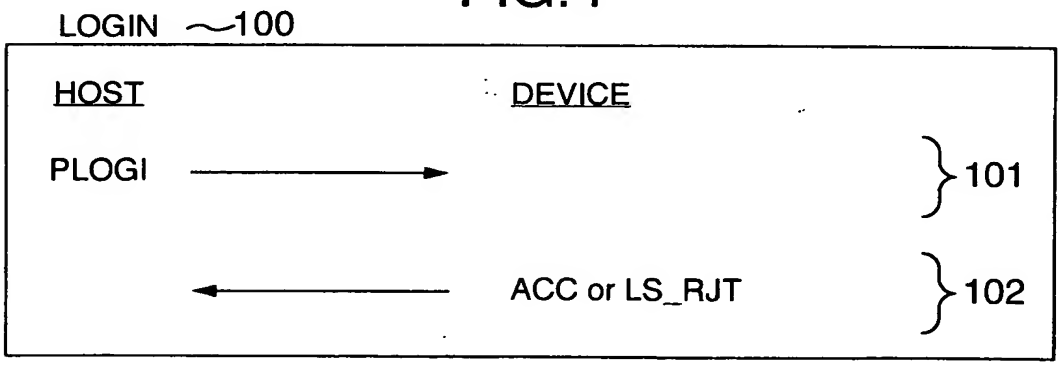


FIG.5

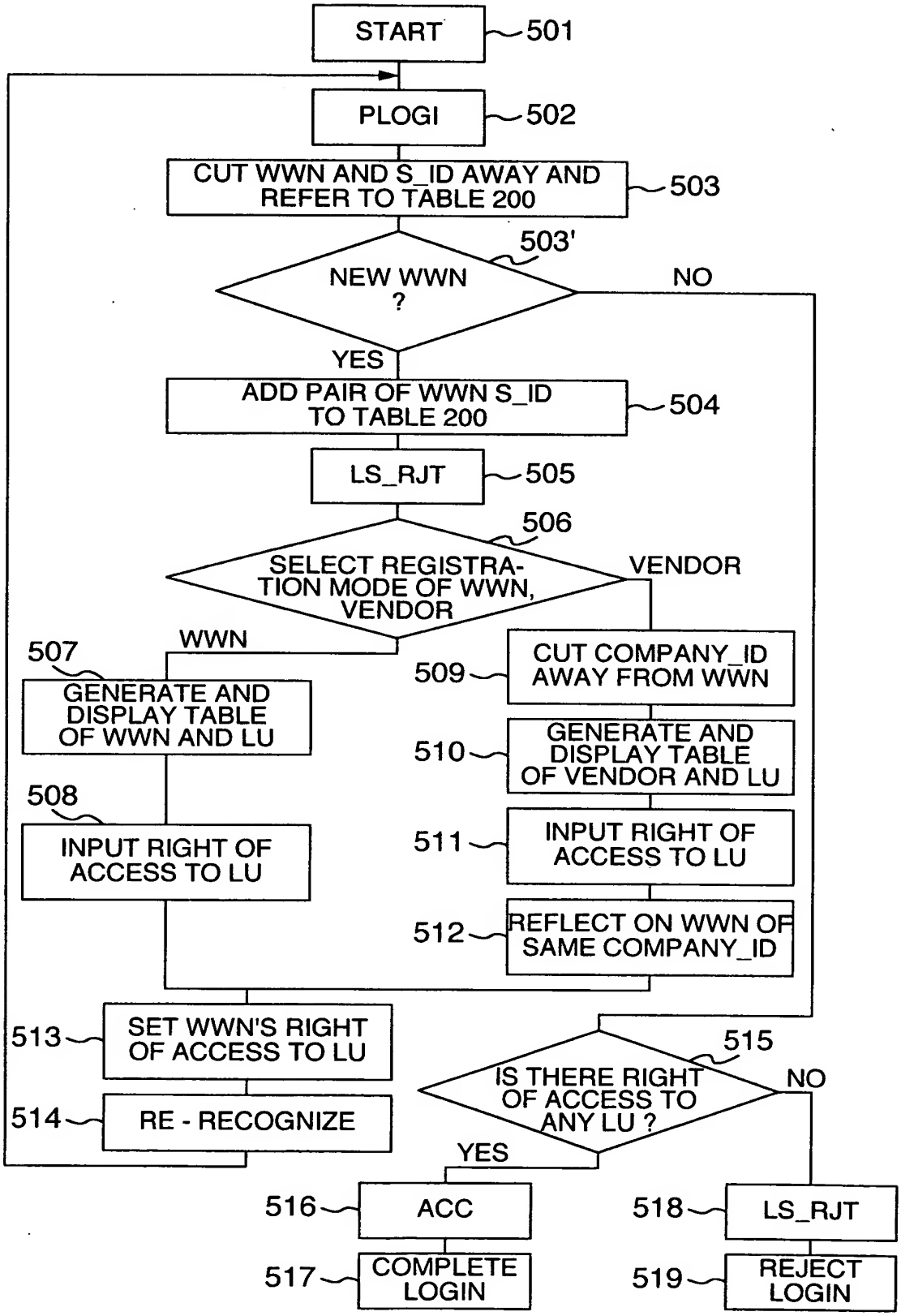

START
501
PLOGI
502
CUT WWN AND S_ID AWAY AND REFER TO TABLE 200
503
503'
NEW WWN ?
NO
YES
ADD PAIR OF WWN S_ID TO TABLE 200
504
LS_RJT
505
506
SELECT REGISTRATION MODE OF WWN, VENDOR
VENDOR
WWN
507
GENERATE AND DISPLAY TABLE OF WWN AND LU
508
INPUT RIGHT OF ACCESS TO LU
509
CUT COMPANY_ID AWAY FROM WWN
510
GENERATE AND DISPLAY TABLE OF VENDOR AND LU
511
INPUT RIGHT OF ACCESS TO LU
512
REFLECT ON WWN OF SAME COMPANY_ID
513
SET WWN'S RIGHT OF ACCESS TO LU
514
RE - RECOGNIZE
515
IS THERE RIGHT OF ACCESS TO ANY LU ?
NO
YES
516
ACC
517
COMPLETE LOGIN
518
LS_RJT
519
REJECT LOGIN

FIG.6

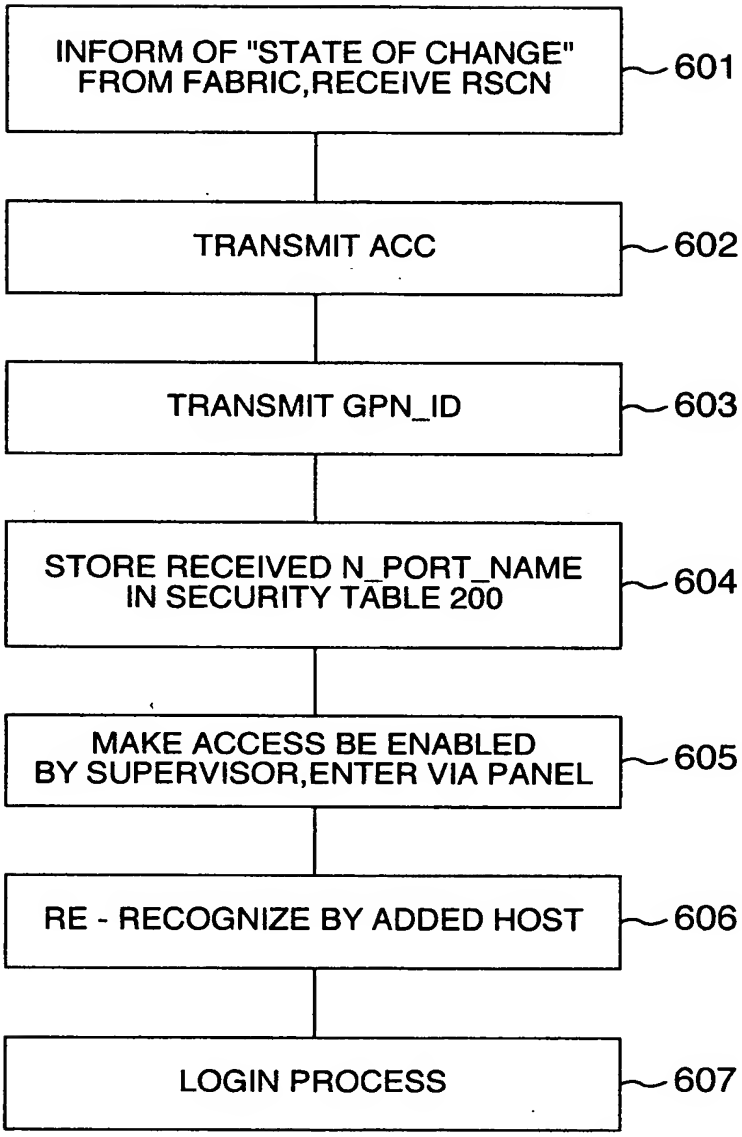

INFORM OF "STATE OF CHANGE" FROM FABRIC,RECEIVE RSCN
601
TRANSMIT ACC
602
TRANSMIT GPN_ID
603
STORE RECEIVED N_PORT_NAME IN SECURITY TABLE 200
604
MAKE ACCESS BE ENABLED BY SUPERVISOR,ENTER VIA PANEL
605
RE - RECOGNIZE BY ADDED HOST
606
LOGIN PROCESS
607

FIG.7A

	WWN	S_ID
HOST A	01234567 89ABCDEF	FFFF01
HOST B	01234567 89ABCDEE	FFFF02
HOST C	01234567 89ABCDED	FFFF03

200

FIG.7B

	ACCESS PERMIT / DENY	
	LU 0	LU 1
HOST A	ENABLE	DISABLE
HOST B	DISABLE	ENABLE
HOST C	DISABLE	ENABLE

201

FIG.7C

	ACCESS PERMIT / DENY	
	LU 0	LU 1
VENDOR A	DISABLE	ENABLE
VENDOR B	ENABLE	DISABLE

202

FIG.7D

WWN	S_ID	ACCESS PERMIT / DENY	
		LU 0	LU 1
01234567 89ABCDEF	FFFF01	ENABLE	DISABLE
01234567 89ABCDEE	FFFF02	DISABLE	ENABLE
01234567 89ABCDED	FFFF03	DISABLE	ENABLE

700

FIG.8

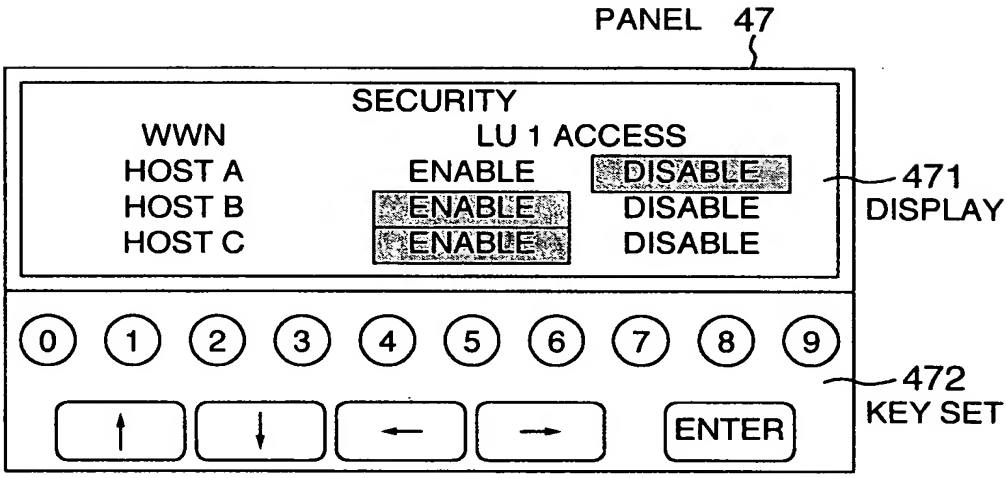

PANEL 47
SECURITY
WWN
LU 1 ACCESS
HOST A
ENABLE
DISABLE
HOST B
ENABLE
DISABLE
HOST C
ENABLE
DISABLE
471
DISPLAY
0
1
2
3
4
5
6
7
8
9
472
KEY SET
ENTER

FIG.9

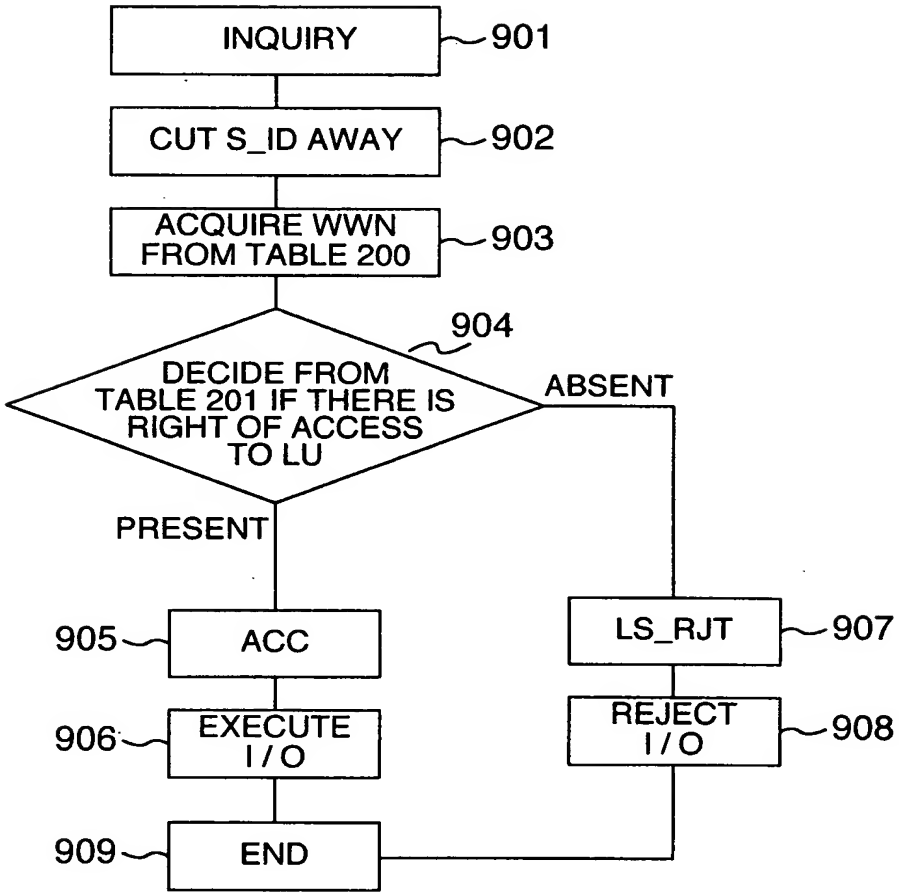

INQUIRY
901
CUT S_ID AWAY
902
ACQUIRE WWN FROM TABLE 200
903
904
DECIDE FROM TABLE 201 IF THERE IS RIGHT OF ACCESS TO LU
ABSENT
PRESENT
905
ACC
906
EXECUTE I/O
909
END
LS_RJT
907
REJECT I/O
908

FIG.10

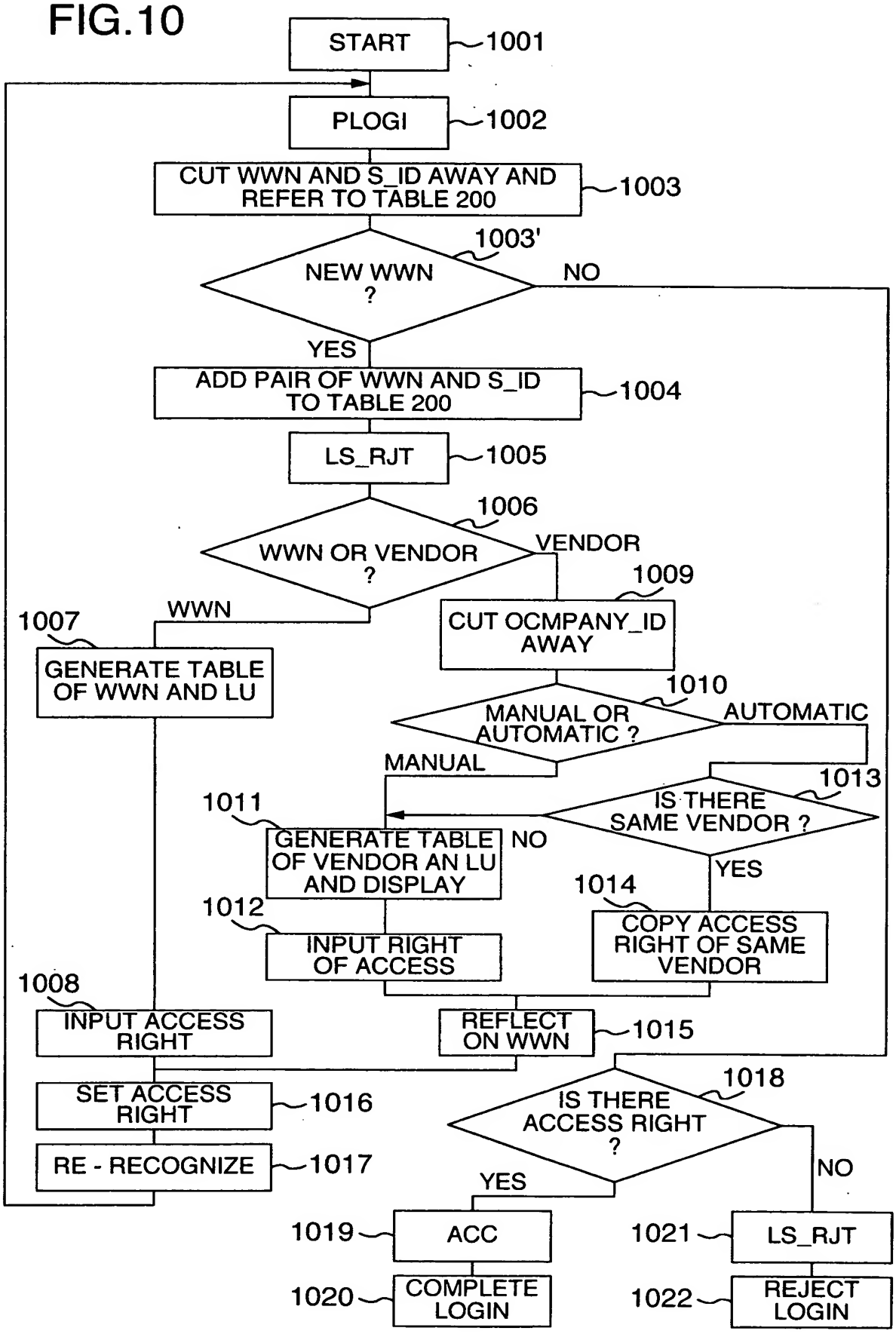

START
1001
PLOGI
1002
CUT WWN AND S_ID AWAY AND REFER TO TABLE 200
1003
1003'
NEW WWN ?
NO
YES
ADD PAIR OF WWN AND S_ID TO TABLE 200
1004
LS_RJT
1005
1006
WWN OR VENDOR ?
VENDOR
1009
CUT OCMPANY_ID AWAY
WWN
1007
GENERATE TABLE OF WWN AND LU
1010
MANUAL OR AUTOMATIC ?
AUTOMATIC
MANUAL
1013
IS THERE SAME VENDOR ?
1011
GENERATE TABLE OF VENDOR AN LU AND DISPLAY
NO
YES
1014
1012
INPUT RIGHT OF ACCESS
COPY ACCESS RIGHT OF SAME VENDOR
1008
INPUT ACCESS RIGHT
REFLECT ON WWN
1015
1018
SET ACCESS RIGHT
1016
IS THERE ACCESS RIGHT ?
RE - RECOGNIZE
1017
NO
YES
1019
ACC
1021
LS_RJT
1020
COMPLETE LOGIN
1022
REJECT LOGIN

FIG.11

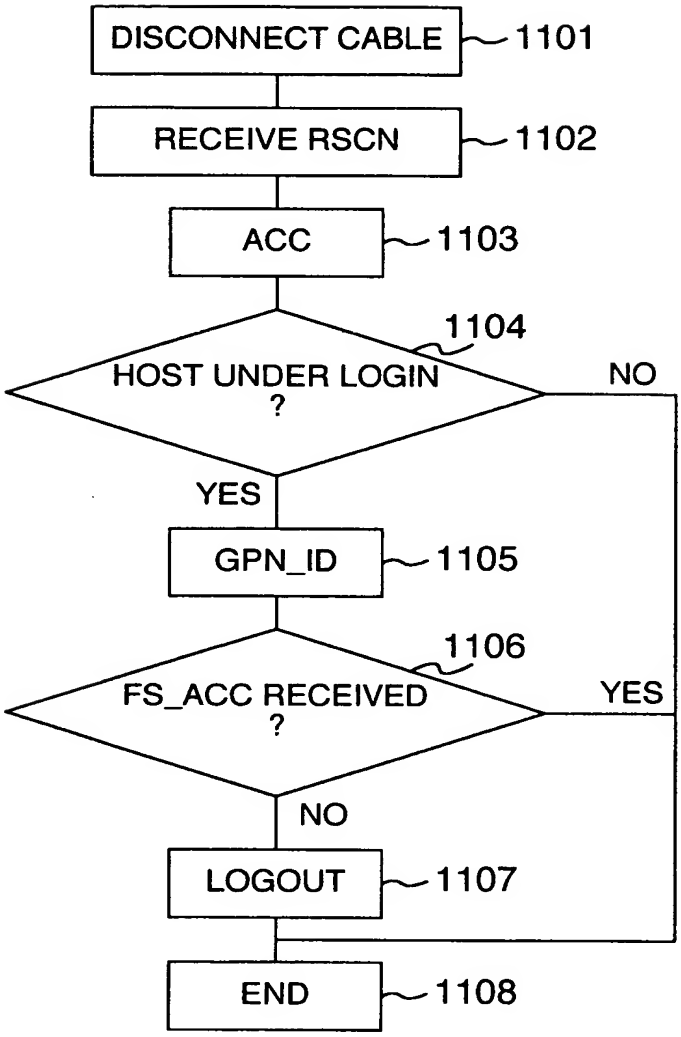

DISCONNECT CABLE
1101
RECEIVE RSCN
1102
ACC
1103
1104
HOST UNDER LOGIN ?
NO
YES
GPN_ID
1105
1106
FS_ACC RECEIVED ?
YES
NO
LOGOUT
1107
END
1108

FIG.12

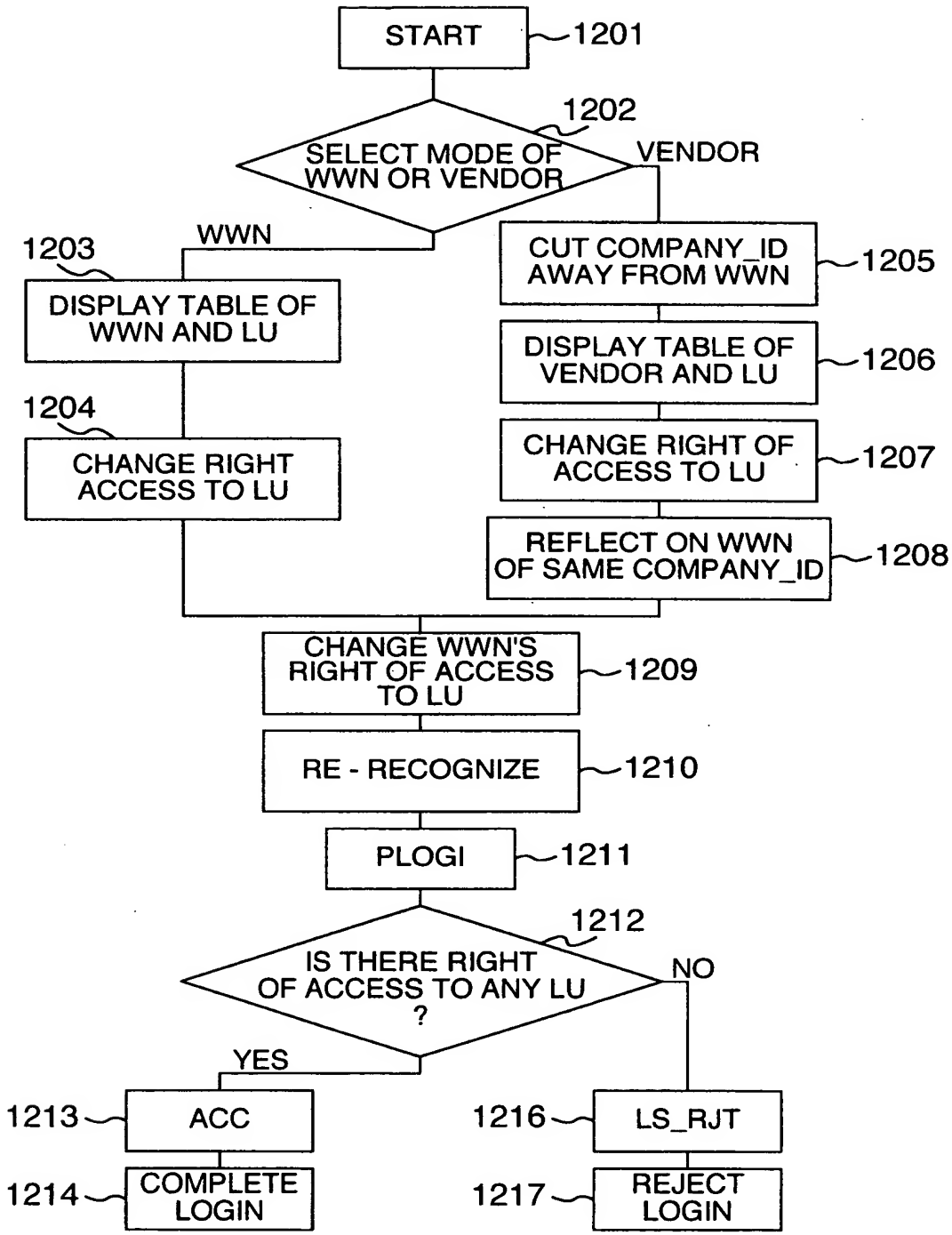
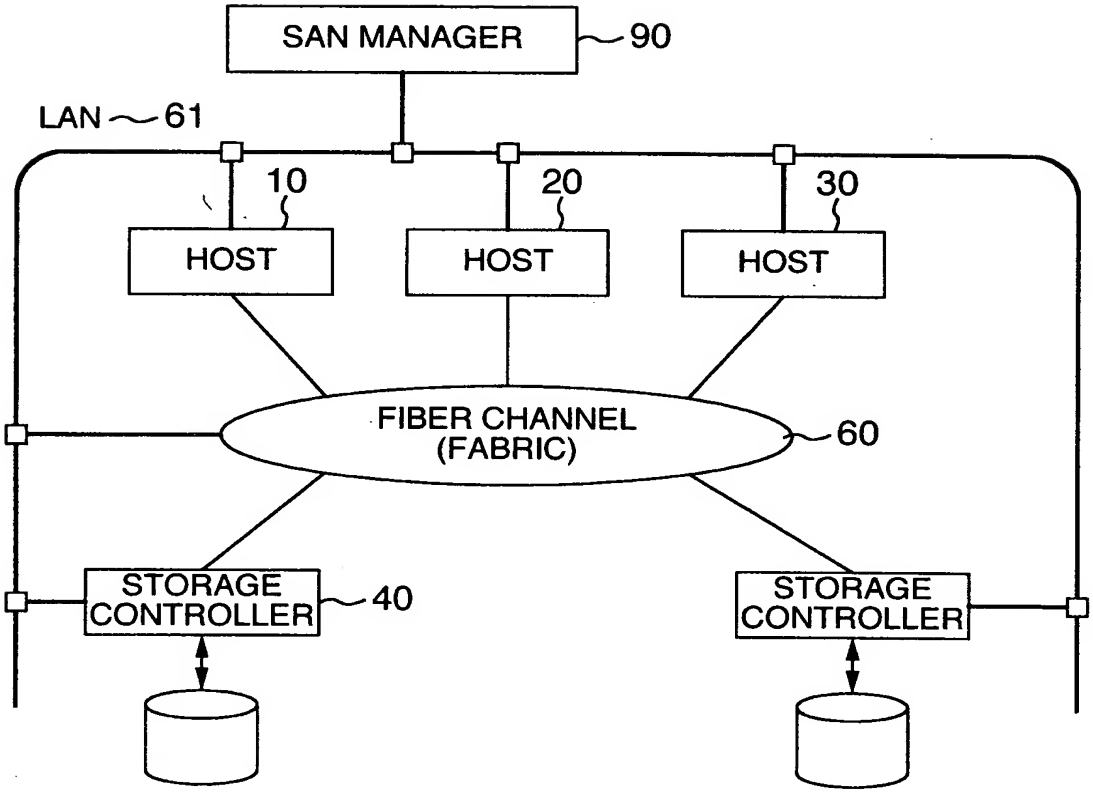

START
1201
1202
SELECT MODE OF WWN OR VENDOR
VENDOR
WWN
1203
DISPLAY TABLE OF WWN AND LU
1204
CHANGE RIGHT ACCESS TO LU
CUT COMPANY_ID AWAY FROM WWN
1205
DISPLAY TABLE OF VENDOR AND LU
1206
CHANGE RIGHT OF ACCESS TO LU
1207
REFLECT ON WWN OF SAME COMPANY_ID
1208
CHANGE WWN'S RIGHT OF ACCESS TO LU
1209
RE - RECOGNIZE
1210
PLOGI
1211
1212
IS THERE RIGHT OF ACCESS TO ANY LU ?
NO
YES
1213
ACC
1214
COMPLETE LOGIN
1216
LS_RJT
1217
REJECT LOGIN

FIG.13


SAN MANAGER
90
LAN
61
10
20
30
HOST
HOST
HOST
FIBER CHANNEL
(FABRIC)
60
STORAGE
CONTROLLER
40
STORAGE
CONTROLLER